

REMARKS/ARGUMENTS

Claims 22 – 30 and 33 - 45 are currently pending in this application. Claims 22 and 45 have been amended. Reconsideration of the rejection of this application in view of the above amendments and the following remarks is respectfully requested.

Claims Objections

Claim 45 was objected to because the Examiner considers that the phrase “gear that that extends” is improper. The double use of the word “that” has been corrected. Additionally, this claim has been amended to set forth that the lead screw channel is positioned between the channels in which the fork bearings are positioned rather than the channels in which the rear bearings are positioned. This conforms to the configuration shown in Fig. 5.

Claims Rejections - 35 USC § 102

Claim(s) 22, 28, 29, and 43 were rejected under 35 USC § 102 (b), as being anticipated by Anderson U.S. Patent No. 1228162.

Claim 22, the only independent claim in the application, has been amended. The claim now sets forth a lifting device which comprises a central column generally vertical when the lifting device is in an operating position. The column includes two rear channels and two forwardly open channels extending the length of the column. Each of the forwardly open channels has a rear wall

and each of the rear channels includes a front and rear wall with a passageway in the front wall open to the front of the column. The channels extend the length of the column. A carriage is positioned to the front of the column and is normally generally horizontal when the lifting device is in an operating position. A pair of spaced forks is provided at one end of the carriage, each having one end connected to the carriage and the other end operatively connected to the column. At least one rear bearing is provided at the other end of each fork. The rear bearing of one of the forks rides in one of the rear channels between the front and rear walls with its associated fork extending through the associated passageway. The rear bearing of the other said fork rides in the other of the rear channels between its front and rear walls with its associated fork extending through the associated passageway. A fork bearing is provided on each fork positioned downwardly and forwardly from the rear bearing. The fork bearing of one of the forks rides in one of the forwardly open channels against the rear wall and the fork bearing of the other of said forks rides in the other of the forwardly open channels against the rear wall whereby the carriage is moveable along said column.

Thus, as claimed, the lifting device includes a central column on which a carriage is operatively mounted for up and down movement. The carriage is connected to the column by means of rear bearings on spaced forks positioned in channels in the columns with the forks extending through passageways open to the front of the column. The rear bearings are contained between the front

and rear walls of the column. Fork bearings on the spaced forks ride along open channels in the column with the bearings riding against the rear wall of the forwardly open channels. With this arrangement, the rear bearings are contained while the fork bearings merely ride in the forwardly open channels such that carriage can be pivoted around the axis of the rear bearings.

The arrangement of the carriage and supporting structure shown in the Anderson device is completely different from that claimed. In the Anderson device as shown in Figures 1 - 6, there are spaced uprights 13 and 14, each of which is in the form of a "T". There is no central column as claimed. There is no rear channel having a front and rear wall in which the rear bearings are contained and which has a passageway in its front wall through which the fork passes. In addition, there is no forwardly open channel having a rear wall.

The carriage of Anderson is provided with two angle bars, each of which has a rearward and forward roller attached thereto. Each of the rollers has a groove therein. The groove of the rearward roller rides along one side edge of the crossbar of the "T" and the groove of the forward roller rides along the opposite side edge of the crossbar of the "T". Therefore, the rear rollers of the Anderson device are not contained in a channel as claimed. Additionally, the front roller does not ride in a forwardly open channel, but rather, rides along the side edge of the crossbar of the "T". In fact, the Anderson device, in the embodiment of Figures 1-6, does not disclose any channels for the bearings as set forth in the claims.

In the embodiment shown in Figure 7 of the Anderson reference, a channel beam 48 is shown in which both the forward and rearward rollers are contained. However, in this embodiment, there is no central column, no forward and rearward channel, no passageway through the front wall of a rearward channel and no forwardly open channel having a rear wall along which the fork bearing rides.

In order for a reference to provide a basis for anticipating a claim, the reference must disclose each and every element of the claim. See MPEP §2131. As discussed above, Anderson does not disclose or suggest all the limitations of claim 22. The Anderson reference does not disclose the particularly claimed arrangement of a column, channels, bearings, and passageways as set in the claim. Additionally, it is submitted that there is no reasonable interpretation of the structure of the device shown in the Anderson reference that could result in the conclusion that the Anderson reference discloses all the limitations of claim 22. Accordingly, claim 22 cannot be held to be anticipated by the Anderson reference and claim 22 is patentable over such reference.

Claims 28, 29 and 43 depend directly or indirectly upon claim 22, which, as discussed above, is patentable over the Anderson reference. Accordingly, claims 28, 29 and 43 are patentable for the reasons set forth in connection with claim 22.

Claim Rejections-35 U.S.C. §103

Claims 23, 26, 38 and 45 were rejected under 35 U.S.C. §103 as being unpatentable over Anderson in view of Kim, U.S. Publication No. 2001/0038786.

Claim 23 sets forth that the lifting device includes a slide having two ears and that the column has two flanges. The ears on the slide engage the flange to support the flange for movement along the column. The claim also sets forth that the lead screw engages the slide to move the slide along the column upon rotation of the lead screw. The slide is operatively connected to the forks to move the forks along the column as the lead screw is rotated.

It is the Examiner's position that Anderson discloses a slide 24, having two ears, shown as the ends of the cross piece 24, and a lead screw 37 in engagement with the slide 24 to move the slide 24 along the column 13, 14 upon rotation of the lead screw. The Examiner admits that Anderson is silent concerning a column having two flanges with ears engaging flanges to support the slide for movement along the column.

The Examiner maintains that Kim teaches a slide 20 having two ears, shown as the ends of the lifting platform 20, with the column having two flanges, with ears engaging the flanges to support the slide 20 for movement along a column 10, and a lead screw 31 in engagement with the slide 20 to move the slide 20 along column 10. The Examiner alleges that it would have been obvious

to one of ordinary skill in the art to provide the column disclosed by Anderson with flanges as taught by Kim engaged to facilitate movement of the carriage.

The Examiner considers the cross piece 24 in the Anderson patent to be the equivalent of the claimed slide. However, this cross piece does not have two ears that engage flanges on a column. In fact, the cross piece is not mounted on the column at all. The cross piece is simply attached to the rearward extending bars 23.

In the Kim reference, what the Examiner considers a slide is merely the top of the lifting platform 20. There is no slide member in the Kim device that rides along a column and is attached to forks. Also, the lead screw of Kim is connected to the platform through mounting unit 30, not through the member 20. Therefore, even if the Kim reference could be combined with Anderson, the combination would not result in the claimed subject matter since neither of the references teach or suggest a slide having ears in engagement with flanges on a column and to which the lead screw is operatively connected and which is also connected to the forks to move the forks along the column where the lead screw is located.

Claim 26, which is dependent upon claim 23, sets forth that the lead screw is disposed within the column. The Examiner mentions that in Anderson, the lead screw 37 is disposed within a column 13, 14. Actually, the lead screw is disposed between the two members 13 and 14, and not within a column as set forth in the claim. The two separate members 13 and 14 cannot be considered a

column when spaced apart as shown. Accordingly, claim 26 is patentable for this reason as well as the reasons set forth in connection with claim 23.

Claim 38 is indirectly dependent upon claim 22 and is patentable for the reasons set forth with respect to that claim. Kim does not contain any teaching or disclosure which would overcome the deficiencies of the Anderson reference as discussed above in connection with claim 22.

Claim 45, which depends from claim 26, sets forth that the lead screw is disposed in a forwardly open lead screw channel in the column that is positioned between the channels in which the fork bearings are positioned. The claim also recites that the flanges extend sideways from either side of the lead screw channel and that the slide has a rearwardly facing gear that extends into the lead screw channel in operative engagement with the lead screw.

The Examiner takes the position that Anderson discloses a lead screw 37 that is disposed in a forwardly open lead screw channel shown between uprights 13, 14 and the slide 24 has a rearward facing gear 38 that extends into the lead screw channel into operative engagement with a lead screw. The Examiner maintains that Anderson is silent concerning flanges that extend sideways from either side of the lead screw channel, but that Kim teaches that flanges extend sideways from either side of the lead screw channel. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to provide the columns disclosed by Anderson with flanges as taught by Kim, and engage the

ears disclosed by Anderson to the flanges as taught by Kim to facilitate movement of the carriage.

In Anderson, there is no forwardly open lead screw channel in a column. The open area between the two uprights 13 and 14 cannot in any way be considered a forwardly open channel in a column. In addition, contrary to what the Examiner alleges, Kim does not have a lead screw channel and therefore cannot have flanges extending sideways from either side of such a channel. Therefore, even if it would be obvious somehow to combine the Anderson and Kim references, any such combination would not result in a device that has a forwardly opening lead screw channel in a column and flanges extending sideways from either side of the lead screw channel as set forth in the claim. Claim 45 is patentable over the combination of the Anderson and Kim references for these reasons, as well as for the reasons set forth in connection with claims 26 and 22 upon which claim 45 directly and indirectly depends.

Claims 24, 25 and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Anderson et al in view of Kim further in view of Tsai, U.S. Patent No. 6425599.

Claim 24 sets forth that the device can be folded with the column and carriage generally parallel so that the device can be transported or stored. Regarding claim 24, the Examiner admits that Anderson is silent as to whether it can be folded. The Examiner refers to the Tsai patent for its showing of a device wherein a column 21 and carriage 50 may be folded together.

However, it is noted that the Tsai device does not utilize a carriage that is attached to a column and moves up and down with respect thereto. Thus, the Tsai presents no teaching for making a carriage that is moveable along a column collapsible. The Tsai reference does not contain any structural disclosure that would be applicable to the Anderson reference to render that carriage collapsible. Therefore, the combination of Anderson, Kim and Tsai does not render obvious the claimed subject matter of claim 24. In addition, the Tsai reference does not contain any disclosure that would overcome the deficiencies of the Anderson patent as set forth in connection with claim 22. Therefore, claim 24, which is dependent upon claim 22, is patentable for the reasons set forth above in connection with claim 22.

Claim 25, which is dependent upon claim 24, adds the feature of a brake mechanism that can be activated when the device is folded. The Examiner refers to the Kim patent for teaching of a brake mechanism. However, in the Kim patent, paragraph [0034] to which the Examiner makes reference, refers to the braking of the carriage as it moves down. There is no teaching or suggestion in any of the references, Anderson, Kim or Tsai of providing a brake mechanism for the device that can be activated when the device is folded. Accordingly claim 25 is patentable over any combination of these references, as well as for the reasons set forth in connection with claim 22.

Claim 30 depends upon claim 24 and is patentable for the reasons set forth in connection with that claim.

Claims 27, 35, and 36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kim and further in view of Rhodes U.S. Patent 3907138. Claims 27, 35 and 36 are all dependent, either directly or indirectly, upon claim 22. The Rhodes patent does not contain any disclosure that would overcome the basic deficiencies of the Anderson patent as set forth in connection with claim 22. The Rhodes patent discloses a hand truck in which the carriage or platform 35 is used to support a load, while the frame, along with the wheels, is raised relative to the platform. This is a different operation than that of the structure set forth in the claims in which the carriage that supports the load is raised relative to the column. In Rhodes there are no forks having bearings mounted in channels as set forth in the claim. Accordingly, the Rhodes patent does not provide any teachings or suggestions that can be combined with Anderson, and/or Kim, to render the subject matter of claims 27, 35, and 36 obvious.

Claims 31 and 32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kim and further in view of Rountree, U.S. Patent 6561745. These claims were canceled in the previous Response to reduce the number of claims. The rejection of these claims at this point is not understood.

Claim 33, which is dependent upon claim 22, was rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kim further in view Hsieh et al, U.S. Patent 5951037. The Hsieh et al patent was cited by the

Examiner for its showing of a platform 50 which can be selectively manually lengthened or shortened. However, it is noted that the platform cannot be raised or lowered. This reference does not contain any teaching or suggestion that would overcome the deficiencies of the Kim and Anderson patents as discussed above in connection with claims 22 and 33. Therefore, claim 33 is patentable over any possible combination of the Anderson, Kim and Hsieh patents for the reasons set forth in connection with claims 22 and 33.

Claim 34 was rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, in view of Kim, further in view of Hanson, U. S. Patent No. 2778515. The Hanson patent was cited for a showing of an upper ball foot disposed at an upper end of a column that engages a surface on which the device is placed when the column is horizontal. It is submitted first that the Hanson patent merely shows a handle portion resting on the floor rather than a ball foot as set forth in claim 34. Additionally, the Hanson patent does not contain any disclosure that would overcome deficiencies of the Anderson and Kim patents as discussed above in connection with claim 22. The platform of claim 21 of the Hanson device is fixed to the column and is not adapted to be raised or lowered by means of forks having bearings riding in a column. It is submitted that the Hanson patent contains no disclosure that could be combined with the Anderson and Kim disclosures that would result in a structure that would render obvious the subject matter of claim 34.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kim further in view of Lemme et al, U.S. Patent No. 4579504. The Lemme patent was cited by the Examiner for its showing of a crane structure extending from a column 14. The Lemme patent discloses a crane that is used with a lifting device such as a forklift. In the case of the Lemme device, the forklift or platform is raised or lowered by means of a chain. There is no specific showing in the Lemme patent as to how the forklift is attached to the mast 14 for movement relative thereto. Accordingly, this patent contains no disclosure that would serve to overcome the basic deficiencies of the Anderson and Kim references as set forth above in connection with claims 22 and 23. Therefore, even if the Anderson, Kim and Lemme disclosures could be combined, such combination would not render obvious the subject matter of claim 37.

Claims 39 and 40 were rejected as unpatentable over Anderson in view of Kim, further in view of Johansson, U.S. Patent 5951234. The Johansson patent was cited for its showing of a vertical circular wheel disposed on a horizontal shaft at the free end of a chassis. The Johansson patent does not disclose a carriage that is attached to a column by means of spaced forks having bearings that ride in channels. Clearly, the Johansson patent has no disclosure that can be combined with the Anderson and/or Kim patent to overcome the basic deficiencies of these patents as set forth in connection with claims 22 and 23

above. Accordingly, claims 39 and 40, which are directly or indirectly dependent on claim 22, are patentable for the reasons set forth in connection with claim 22.

Claims 41 and 42 were rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kim further in view of Johnson et al U.S. Patent 3445958. The Johnson et al patent was cited for its teaching of wheels that have a relatively soft circular removable covering to facilitate movement over relatively soft terrain. The Johnson et al patent is related to a toy vehicle wheel. There is no disclosure in that patent that would overcome the basic deficiencies of the Anderson and Kim patents as discussed above in connection with claims 22 and 23. Accordingly, even assuming that one would combine the disclosure of the Johnson et al reference with the Anderson and Kim disclosures, the resulting combination would not render obvious the subject matter of claims 41 and 42 that indirectly depend upon claim 22.

Claim 44 was rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson further in view of Chelin U.S. Patent 4056170.

Claim 44, which is dependent upon claim 23, sets forth that the lifting device further includes a rod extending between the spaced forks and that the slide has a forwardly opening channel therein with the rod being received in the channel.

Neither Anderson nor the Kim references show a slide with a forwardly open channel that receives a rod extending between the forks. In the Chelin patent, what the Examiner considers to be a slide is a structure that has bearings

attached thereto that ride in a support beam 12. Lift forks 26 have a hook at their upper end that is mounted on an upper cross brace 24. Nowhere in the Chelin patent is there a disclosure of a slide which moves up and down in a channel and which has a forwardly open channel for receiving a rod extending between forks having bearings that ride in channels. There is no rod between the "forks" 26 of Chelin. The Chelin patent is a completely different arrangement as set forth in the claims. Its disclosure provides no basis for the modification of the Anderson/Kim references that would result in the claimed subject matter. There is no slide member as such in the Anderson patent that could be provided with a channel to receive a bar between the forks. Accordingly, even if the Chelin disclosure were combined with the Kim/Anderson disclosures, such combination would not result in the claimed subject matter. Accordingly, claim 44, is patentable for this reason, as well as for the reasons advanced in connection with claim 23.

Reply To Arguments

The Examiner maintains that according to its broadest interpretation, Anderson discloses a central column comprised of uprights 13 and 14. However, the uprights of Anderson are at each side of the lifting device and not centrally of it.

The Examiner also maintains that the features upon which Applicant relies are not recited in the rejected claims. The Examiner gives as an example the

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statement of a "slide member which rides along a column and which is connected to the platform or carriage". The slide member is specifically set forth in claim 23. That claim further specifies that the slide has movement along the column and also sets forth that the slide is operatively connected to the forks. The claim further sets forth that the forks are provided on the carriage. Therefore, the claim does set forth that the slide member rides along the column and is connected to the platform or carriage. It is submitted, that the differences between the prior art and the claimed subject matter that form the basis of Applicant's arguments are in fact set forth in the claims.

The Examiner sets forth that the teachings of Tsai are merely relied upon for the teachings of a device that can be folded with a column and carriage generally parallel. However, the Tsai patent presents no structural arrangement that could be incorporated into the Anderson device for making the carriage of the Anderson reference collapsible.

Regarding the provision of a brake mechanism that can be activated when the device is folded, the Examiner argues that the phrase "can be" does not necessarily mean must be activated. The claim states that the brake mechanism must be capable of being activated when the device is folded. There is no brake mechanism for the device in Tsai that can be activated when the device is folded.

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CONCLUSION

In view of the above amendments and remarks, it is respectfully submitted that all the claims in this case patentably define over the cited art, taken alone or in any possible combination, and that this case is now in condition for allowance. Favorable consideration of this application by the Examiner is respectfully requested.

Respectfully Submitted,

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